

# **PROGRAM-RELATED FATALITIES**

## **MICHIGAN, 2002**



Management Information Systems Section  
Michigan Department of Labor  
& Economic Growth  
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## **INTRODUCTION**

The latest National Census of Fatal Occupational Injuries data shows that 5,524 fatal work injuries occurred in 2002. In Michigan there were 47 Program-Related fatalities reported in 2002 or less than 1.0% of the national total. Program-Related fatalities in Michigan are recorded and tabulated by the Management Information Systems Section, Michigan Occupational Safety and Health Administration (MIOSHA), Michigan Department of Labor and Economic Growth. The sources of data include the Basic Report of Injury - Form 100 and telephone reports of fatalities to MIOSHA. The conditions necessary for a fatal case to be Program-Related are given in the NOTE ON PROGRAM RELATED CASES (see Page 8).

Program-Related fatalities have been recorded since 1975 in Michigan. A high of 115 Program-Related fatalities occurred in 1977. There was a gradual decrease until 1983 when 52 Program-Related fatalities were recorded. Program-Related fatalities increased from 52 in 1983 to 74 for 1986. A two-year decline to 64 cases in 1988 was recorded before an increase to 76 Program-Related fatalities in 1989. Between 1989 and 1993 the number of fatalities recorded dropped to 51, showing a reduction of about 54 percent from the number of cases in 1978. There were 61 Program-Related fatalities recorded during 1994, this decreased to 48 Program-Related fatalities in 1995 and decreased again to 46 Program-Related fatalities in 1996. This is 58.6 percent lower than the 111 recorded in 1978 and the lowest number of Program-Related fatalities recorded in over 20 years. The 76 program-related fatalities recorded in 1997 is 31.6% lower than the 1978 figure of 111. The number of fatalities decreased from 76 in 1997 to 68 in 1998 before increasing to 87 in 1999. Fifty-nine Program-Related fatalities were recorded in 2000, 58 were recorded in 2001, and the downward trend continued in 2002 with 47 Program-Related fatalities.

The intention of this report is to contribute to a further understanding of Program-Related fatality profiles and hence, to the continued effort of preventing and reducing fatal cases. Information presented in this report may be of interest to employers and employees, in general, and safety professionals and consultants, in particular. Any inquiries regarding this report may be addressed to:

**Management Information Systems Section**

Michigan Department of Labor & Economic Growth  
7150 Harris Drive, Box 30643  
Lansing, Michigan 48909-8143  
Telephone (517) 322-1851

## PROGRAM-RELATED FATALITIES MICHIGAN 2002

This Program-Related fatality information for Michigan was compiled from the "Employers Basic Report of Injury", Workers Disability Form 100's and from direct telephone reports of fatalities to MIOSHA. Only fatal cases that are Program-Related, as defined by MIOSHA, Michigan Department of Labor and Economic Growth are compiled. Therefore the data does not include fatalities resulting from heart attacks, homicides, suicides, highway personal motor vehicle trips and aircraft accidents. The figures are shown in **Tables 1 through 12**.

A definition of Program-Related cases can be found on Page 8 of this report. Program-Related fatality trends for 1977 through 2002 are shown in **Table 1**.

This report is an overview of how the fatalities were distributed across industry groups; occupations; sources of injury or illness; events or exposures; parts of body affected; and nature of injury or illness. Frequencies of fatalities by age group, gender, month of occurrence and counties of occurrence are also provided.

**Table 2** shows the trend in the distribution of Program-Related fatalities by industry groups from 1995 to 2002. Beginning in 1999, the industry group category is based on the standard industrial classification (SIC) of the type of job being performed by the employee at the time of the accident. Prior to 1999, the industry group category was based on the standard industrial classification (SIC) of the employer regardless of the type of job being performed by the employee at the time of the accident. This change was found to have minimal impact on the industry group categories.

The largest numbers of fatalities occurred in the Manufacturing and Construction industries. The Construction, Manufacturing, Wholesale Trade, and Public Administration industry divisions experienced a decrease from the previous year. Oil and Gas Extraction, Transportation and Public Utilities, and Retail Trade showed increases in the number of fatalities from the previous year. The industries of Agriculture, Forestry and Fishing and Services

recorded the same number of fatalities as the previous year. The largest decrease was recorded in Manufacturing recording 8 fewer fatalities in 2002 than in 2001.

Program-Related fatalities by occupation are shown in **Table 3**. The most affected occupation group in 2002 with 14 fatalities was Construction Trades followed by Helpers, Construction and Extractive with a total of 10 fatalities; Transportation and Moving Material and Machine Operators, Assemblers and Inspectors both recorded 5 fatalities, while 4 fatalities occurred in the Farming, Forestry and Fishing occupation group in 2002.

The sources of injury or illness leading to Program-Related fatalities during 2002 - 2001 are listed in **Table 4**. Floors, Walkways, Ground Surfaces; (12) Highway Vehicle Motorized (5) Construction, Logging & Mining Machinery; and Containers; (4) Building Materials, Solid Elements (3) combined, accounted for 32 cases or about 68 percent of the sources of fatal injury or illness.

The number of victims that Fell to a Lower Level during 2002 was ten. Nine of the fatalities were the result of being Caught in, or Compressed by Equipment, and Struck by Object accounted for seven fatalities. **Table 5** shows Program-Related fatalities by event or exposure.

Parts of the body affected by fatal injury or illness show that Multiple Parts, Head, and Body Systems, together accounted for 83 percent of the fatalities. Fifteen fatal injuries or illnesses were specified for Multiple Parts; Head recorded 13 cases and 11 cases recorded Body Systems as the part of body affected by fatal injuries and illnesses during 2002. Data is shown in **Table 6**.

The nature of the fatal injuries or illnesses reported were Intracranial Injuries (13), Multiple Injuries (11), Internal Injuries of the Trunk and Electric Shock and Electrocution (both with 6), and Asphyxiation, Strangulation, Drowning, Suffocation (4). A significant number, approximately 28 percent, of the fatalities that occurred in 2002, were the result of intracranial injuries to workers. Details of the nature of injuries and illnesses causing Program-Related fatalities are given in **Table 7**.

Employees between the ages of 26 and 45 suffered about 47 percent of the fatal injuries and illnesses. There were 2 fatalities to workers under the age of 21. The age group of 21-25 suffered 5 fatalities. The age groups of 51-55 suffered 8 fatalities. The age group of 41-45 recorded the highest number for any of the five-year age categories with 11. The age group of 61 and over suffered 1 fatality. Of the 47 victims, 46 were male employees. The distribution of Program-Related fatalities by age and gender are shown in **Tables 8 and 9**.

In 2002, November recorded the highest number of fatalities (7). Six Program-Related fatalities were reported during September. The months of January, July, and October each recorded 5 fatalities while the months of April and December recorded 4 fatalities each. The month of March recorded three fatalities and February, May, June and August all showed 2 fatalities each. Details are shown in **Table 10**.

Program-Related fatalities by industry group and day of the week are shown in **Table 11**. The highest number of fatalities by day of the week shows Friday with 12, followed by Thursday showing 10, while Wednesday recorded 9. Seven Program-Related fatalities were recorded on Monday and 6 on Tuesday. There were 3 fatalities recorded on Saturday in 2002 and 0 recorded on Sunday.

The distribution of fatality cases by counties shows that 24 counties reported Program-Related fatalities in 2002. Oakland County reported the largest (7) and Wayne County showed the second largest number of cases with 5. Genesee, Ingham, Kalamazoo and Macomb County each reported 3 fatalities. A complete distribution of fatality cases by county of occurrence is shown in **Table 12**.

Even though Michigan's 2002 total Program-Related fatality cases are far less than the thousands of cases reported nationwide, the consequences of these on-the-job deaths in terms of human suffering, lost workdays, decreased production, and increased compensation rates are all too significant to be overlooked.

In order for Michigan to reduce the number of on-the-job fatality cases, it requires a conscious effort on the part of employers to recognize and comply with MIOSHA standards, develop and implement safe working procedures and

assure that employees observe and practice these procedures. The MIOSHA program offers on-site consultation and safety education and training opportunities to employers and employees alike to help them achieve this goal.

The Program-Related fatality data for Michigan are presented in the following series of **Tables 1 through 12**. A brief description of how the Program-Related fatalities occurred is also provided following the series of tables. The descriptions are listed by industry groups based on the standard industrial classification of the type of job being performed by the employee at the time of the accident and are valuable insights as to how the accidents occurred. The information can be very useful to safety professionals, in particular, for use in prevention planning.

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### **NOTE ON PROGRAM-RELATED CASES**

A fatality is recorded as Program-Related if it appears to be related to one or more of the following conditions:

1. The incident was found to have resulted from violations of MIOSHA safety and health standards or the general duty clause;
2. The incident was considered to be the result of a failure to follow a good safety and health practice that would be the subject of a safety and health recommendation;
3. The information describing the incident is insufficient to make a clear distinction between a "Program-Related" and "non-Program-Related" incident, but the type and nature of the injury indicates that there is a high probability that the injury was the result of a failure to adhere to one or more MIOSHA standards, the general duty clause, or good safety and health practice;

Any further inquiries may be addressed to:

**MIOSHA  
MICHIGAN DEPARTMENT OF LABOR & ECONOMIC GROWTH  
7150 HARRIS DRIVE, BOX 30643  
LANSING, MICHIGAN 48909-8143  
(517) 322-1851**



**TABLE 1**  
**PROGRAM-RELATED FATALITY TRENDS**  
**MICHIGAN 1978 - 2002**

YEAR	CASES	PERCENT CHANGE	CUMULATIVE PERCENT CHANGE
1978	111	-----	-----
1979	89	-19.8	- 19.8
1980	73	-18.0	- 34.2
1981	65	-11.0	- 41.4
1982	67	+ 3.1	- 39.6
1983	52	-22.4	- 53.2
1984	59	+13.5	- 46.8
1985	67	+13.6	- 39.6
1986	74	+10.4	- 33.3
1987	73	- 1.4	- 34.2
1988	64	-12.3	- 42.3
1989	76	+18.8	- 31.5
1990	72	- 5.3	- 35.1
1991	60	-16.7	- 45.9
1992	61	+1.7	- 45.0
1993	51	-16.4	- 54.1
1994	61	+19.6	- 45.0
1995	48	- 21.3	- 56.8
1996	46	- 4.2	-58.6
1997	76	+65.2	-31.6
1998	68	-10.5	-38.7
1999	87	+27.9	-21.6
2000	59	-32.2	-46.8
2001	58	- 1.7	-47.8
2002	47	-19.0	-57.7

SOURCE: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 2**  
**PROGRAM-RELATED FATALITIES**  
**BY INDUSTRY GROUPS**  
**MICHIGAN 1995 - 2002**

— INDUSTRY GROUP	YEARS							
	1995	1996	1997	1998	1999	2000	2001	2002
—								
AGRICULTURE, FORESTRY AND FISHING	5	1	2	4	2	1	3	3
OIL AND GAS EXTRACTION	1	0	0	0	0	0	0	1
CONSTRUCTION	15	18	32	25	33	24	28	26
MANUFACTURING	16	12	22	22	25	17	16	8
TRANSPORTATION AND PUBLIC UTILITIES	4	5	5	5	10	5	2	5
WHOLESALE TRADE	2	2	1	3	5	6	6	1
RETAIL TRADE	1	1	3	4	3	1	0	1
FINANCE, INSURANCE AND REAL ESTATE	0	0	1	0	0	0	0	0
SERVICES	2	2	8	3	8	3	2	2
PUBLIC ADMINISTRATION	2	5	2	2	1	2	1	0
<b>TOTAL</b>	<b>48</b>	<b>46</b>	<b>76</b>	<b>68</b>	<b>87</b>	<b>59</b>	<b>58</b>	<b>47</b>

Note: Beginning in 1999, the industry group category is based on the standard industrial classification (SIC) of the type of job being performed by the employee at the time of the accident.

Source: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 3**  
**PROGRAM-RELATED FATALITIES**  
**BY OCCUPATION**  
**MICHIGAN 2002 - 2001**

<b>OCCUPATION</b>	<b>NUMBER OF CASES</b>	
	<b>2002</b>	<b>2001</b>
Executive, Administrative and Managerial	1	2
Sales Occupations	2	1
Protective Service Occupations	0	1
Service, Except Protective and Household	3	3
Farming, Forestry and Fishing	4	4
Mechanics and Repairers	2	2
Construction Trades	14	13
Precision Production	1	2
Machine Operators, Assemblers and Inspectors	5	8
Fabricators, Assemblers and Handworking	0	1
Production Inspectors, Testers, Samplers and Weighers	0	1
Transportation and Material Moving	5	9
Handlers, Equipment Cleaners, Helpers and Laborers	0	11
Helpers, Construction and Extractive	10	0
<b>TOTAL</b>	<b>47</b>	<b>58</b>

Source: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 4**  
**PROGRAM-RELATED FATALITIES BY**  
**SOURCE OF INJURY OR ILLNESS MICHIGAN 2002 - 2001**

<b>SOURCE OF INJURY OR ILLNESS</b>	<b>NUMBER OF CASES</b>	
	<b>2002</b>	<b>2001</b>
Agricultural and Garden Machinery	1	--
Atmospheric & Environmental Conditions	1	1
Building Materials, Solid Elements	3	6
Coal, Natural Gas, Petroleum Fuels & Products	1	--
Construction, Logging & Mining Machinery	4	8
Containers	4	2
Floors, Walkways, Ground Surfaces	12	13
Food Products, Fresh or Processed	0	1
Furniture and Fixtures	1	0
Hand tools - Powered	0	1
Highway Vehicle Motorized	5	4
Hydrogen Sulfide	0	2
Ladders	2	--
Machine, Tool & Electric Parts	2	1
Material Handling Machinery	2	4
Metal, Wood, & Special Material Machinery	2	3
Miscellaneous Machinery	0	2
Other Structural Elements	0	1
Oxygen and Oxygen Components	1	0
Person – Injured or Ill Worker	0	1
Plant & Industrial Powered Vehicles, Tractors	2	3
Rail Vehicle	0	1
Recreation & Athletic Equipment	0	1
Rocks, Crushed Stone	0	1
Steam, Vapor, Liquids, nec	2	0
Structures, Buildings, Guard Rails & Scaffolds	2	--
Trees, Logs	0	2
<b>TOTAL</b>	<b>47</b>	<b>58</b>

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Source: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 5**  
**PROGRAM-RELATED FATALITIES**  
**BY EVENT OR EXPOSURE**  
**MICHIGAN 2002 - 2001**

EVENT OR EXPOSURE	NUMBER OF CASES	
	2002	2001
CAUGHT IN, OR COMPRESSED BY EQUIPMENT	9	7
CAUGHT IN/CRUSHED IN COLLAPSING MATERIAL	1	5
CONTACT WITH ELECTRIC CURRENT	6	2
CONTACT WITH OBJECT OR EQUIPMENT	2	--
EXPLOSION	3	2
EXPOSURE TO CAUSTIC, NOXIOUS, OR ALLERGENIC SUBSTANCES	1	--
FALL TO LOWER LEVEL	10	13
FALL ON SAME LEVEL	--	2
FIRE	0	4
NON-HIGHWAY MOTOR VEHICLE ACCIDENTS	2	7
OXYGEN DEFICIENCY	1	--
PEDESTRIAN, NONPASSENGER STRUCK BY VEHICLE, MOBILE EQUIPMENT	5	7
STRUCK BY OBJECT	7	9
<b>TOTAL</b>	<b>47</b>	<b>58</b>

Source: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 6**  
**PROGRAM-RELATED FATALITIES**  
**BY PARTS OF BODY AFFECTED**  
**MICHIGAN 2002 - 2001**

PARTS OF BODY AFFECTED	NUMBER OF CASES	
	2002	2001
ABDOMEN	0	1
ARM	1	0
BODY SYSTEMS	11	9
CHEST	0	1
HEAD	13	16
LEG	1	0
NECK	0	2
MULTIPLE PARTS	15	15
PELVIC REGION	0	1
TRUNK, MULTIPLE	6	13
<b>TOTAL</b>	<b>47</b>	<b>58</b>

Source: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 7**  
**PROGRAM-RELATED FATALITIES**  
**BY NATURE OF INJURY OR ILLNESS**  
**MICHIGAN 2002 - 2001**

NATURE OF INJURY OR ILLNESS	NUMBER OF CASES	
	2002	2001
AMPUTATIONS	1	0
ASPHYXIATION, STRANGULATION DROWNING, SUFFOCATION	4	4
BURN, HEAT	2	2
ELECTRIC SHOCK, ELECTROCUTION	6	2
FRACTURE	--	1
INTERNAL INJURIES OF THE TRUNK	6	15
INTRACRANIAL INJURIES	13	16
MULTIPLE INJURIES	11	13
OPEN WOUNDS	1	2
OTHER POISONING & TOXIC EFFECTS	1	2
OTHER	2	1
<b>TOTAL</b>	<b>47</b>	<b>58</b>

Source: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 8**  
**PROGRAM-RELATED FATALITIES BY AGE**  
**MICHIGAN 2002 - 2001**

<b>AGE</b>	<b>NUMBER OF CASES</b>	
	<b>2002</b>	<b>2001</b>
20 and Under	2	2
21 - 25	5	6
26 - 30	4	8
31 - 35	6	6
36 - 40	1	7
41 - 45	11	9
46 - 50	7	7
51 - 55	8	5
56 - 60	2	5
61 and Over	1	3
<b>TOTAL</b>	<b>47</b>	<b>58</b>

**TABLE 9**  
**PROGRAM-RELATED FATALITIES BY GENDER**  
**MICHIGAN 2002 - 2001**

<b>GENDER</b>	<b>NUMBER OF CASES</b>	
	<b>2002</b>	<b>2001</b>



MALE	46	57
FEMALE	1	1
<b>TOTAL</b>	<b>47</b>	<b>58</b>

Source: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 10**  
**PROGRAM-RELATED FATALITIES**  
**BY MONTH OF OCCURRENCE**  
**MICHIGAN 2002 - 2001**

MONTH OF OCCURRENCE	NUMBER OF CASES	
	2002	2001
JANUARY	5	5
FEBRUARY	2	8
MARCH	3	0
APRIL	4	6
MAY	2	4
JUNE	2	7
JULY	5	9
AUGUST	2	5
SEPTEMBER	6	4
OCTOBER	5	9
NOVEMBER	7	0
DECEMBER	4	1
<b>TOTAL</b>	<b>47</b>	<b>58</b>

Source: MIOSHA, Michigan Department of Labor & Economic Growth

**TABLE 11**  
**PROGRAM-RELATED FATALITIES**  
**BY INDUSTRY GROUPS AND DAY OF THE WEEK**  
**MICHIGAN 2002**

INDUSTRY GROUP	DAY OF THE WEEK							TOTAL	
	SUN	MON	TUE	WED	THUR	FRI	SAT		
AGRICULTURE, FORESTRY AND FISHING		0	1	0	0	1	0	1	3
OIL AND GAS EXTRACTION		0	0	0	0	0	1	0	1
CONSTRUCTION		0	4	5	7	5	4	1	26
MANUFACTURING		0	1	0	0	3	4	0	8
TRANSPORTATION AND PUBLIC UTILITIES		0	1	0	2	0	2	0	5
WHOLESALE TRADE		0	0	0	0	0	1	0	1
RETAIL TRADE		0	0	1	0	0	0	0	1
FINANCE, INSURANCE & REAL ESTATE		0	0	0	0	0	0	0	0
SERVICES		0	0	0	0	1	0	1	2
PUBLIC ADMINISTRATION		0	0	0	0	0	0	0	0
TOTAL		0	7	6	9	10	12	3	47

**TABLE 12**  
**PROGRAM-RELATED FATALITIES BY**  
**COUNTY OF OCCURRENCE, MICHIGAN 2002**

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COUNTY	NUMBER OF CASES
<hr/>	
ALLEN	1
BAY	2
BERRIEN	2
CHIPPEWA	1
EATON	1
EMMET	1
GENESEE	3
GRAND TRAVERSE	1
INGHAM	3
IOSCO	1
JACKSON	1
KALAMAZOO	3
KENT	2
LAPEER	1
LENAWEE	1
MACOMB	3
MARQUETTE	2
MECOSTA	1
MONROE	1
OAKLAND	7
ROSCOMMON	1
ST. CLAIR	2
WASHTENAW	1
WAYNE	5
<hr/>	
<b>TOTALS</b>	<b>47</b>

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## **PROGRAM-RELATED FATALITY INCIDENTS BRIEF DESCRIPTIONS OF CASES BY INDUSTRY GROUPS**

### **Agriculture, Forestry and Fishing:**

1. Employee and co-workers were taking debris, brush and trees to a pile to burn when he was ran over by skid steer loader.

Violations noted:

None

2. Three employees were standing on a fork attachment on skid steer loader being transported to their work area in nursery by supervisor. As they left the paved road, one employee fell from the attachment and was struck by the loader.

Violations noted:

Powered Industrial Trucks

3. Employee was in process of mixing feed for distribution to cattle. During the process, employee activated power take-off shaft to mix feed and became entangled in the unguarded shafting.

Violations noted:

Farm Field Equipment

Statutory Rules – Failure to Report Fatality

### **Mining:**

4. Employee was replacing a light bulb close to rotating drive shaft on oil drilling rig when he became entangled in drive shaft of unit.

Violations noted:

Oil and Gas Drilling and Service Operations

### **Construction:**

5. Two employees were working on a column. One was working in manlift. Manlift was accidentally activated and employee was crushed.

Violations noted:

General Rules  
Aerial Work Platforms

6. While clearing stone from elevated dump truck, employee was struck by swinging gate of the truck. Received fatal injuries to his head.

Violations noted:

General Rules

### **Construction (continued):**

7. While setting up traffic control devices for upcoming road construction, an employee was struck by car traveling at high rate of speed that veered off road and onto shoulder.

Violations noted:

General Rules

8. Roofer was cutting excess shingles off on roof when he fell to ground 33 feet below.

Violations noted:

Fall Protection  
Fixed and Portable Ladders  
Administrative Rules – Recording and Reporting of Occupational Injuries and Illnesses  
General Rules  
Administrative Rules – Inspections and Investigations, Citations, and Proposed Penalties

9. Three employees were disconnecting a semi truck from a mobile home. As one disconnected the hitch from the mobile home, the driver of the semi truck pulled forward crushing the deceased, as he was standing at the toolbox at the back of the cab on passenger side.

Violations noted:

General Provisions  
Administrative Rules – Reporting and Recording Injuries and Illnesses  
Administrative Rules – Inspections and Investigations, Citations, and Proposed Penalties

10. Employees were installing refractory brick in new kiln. As they were working in bottom of kiln stacking 18-pound bricks onto lifting device with overhead hatch open, a brick was dropped from scaffold 120 feet above and struck employee in the head.

Violations noted:

Lifting and Digging Equipment  
Concrete Construction  
General Rules  
Handling and Storage of Materials

11. While attempting to blank a flange for cleaning, employee was burned by release of steam and hot water.

Violations noted:

General Provisions

Lockout/Tagout  
Confined Space

12. Two employees were attempting to put a ladder on a house when they contacted a 7200-volt overhead power line. One was fatally electrocuted.

Violations noted:

Fixed and Portable Ladders  
General Rules

**Construction (continued):**

13. While employee was walking on road behind a fuel truck, the truck backed up and struck him.

Violations noted:

None

14. Employee was checking road grade when a road grader backing up struck him.

Violations noted:

None

15. Employee was stripping forms under a bridge when the scissor lift dump truck he was in went into dump mode and pinned the victim under the bridge.

Violations noted:

Aerial Work Platforms  
General Rules

16. While unloading concrete sewer pipe from truck, a section of pipe rolled off forks of material handling equipment-crushing employee.

Violations noted:

General Duty

17. Employee was installing steel I-beam post for a guardrail system when he drove his truck into a 14,000-volt power line and was electrocuted.

Violations noted:

General Rules  
Personal Protective Equipment  
Administrative Rules – Recording and Reporting of Occupational Injuries and Illnesses

18. As employee was touching up paint on roof trusses, he fell out of aerial platform 130-feet to surface below.

Violations noted:

Aerial Work Platforms  
General Duty  
Administrative Rules – Recording and Reporting of Occupational Injuries and Illnesses  
General Rules

Personal Protective Equipment  
Electrical installations

19. Employee was climbing a concrete form to unhook the crane after the form had been set when he fell from the form to the concrete 27-feet below.

Violations noted:

Fixed and Portable Ladders  
Concrete Construction  
Fall Protection

**Construction (continued):**

20. While working on a light pole and checking the energized fuse holder, the employee came in contact with a 277-volt electrical circuit.

Violations noted:

Electrical Installations

21. Employee fell while working from an extension ladder approximately 14 feet above concrete floor while installing plumbing.

Violations noted:

Fixed and Portable Ladders  
General Rules

22. Employee was re-roofing three story apartment building when he was struck by lighting and fell to the ground. No fall protection was being used.

Violations noted:

General Rules  
Fall Protection

23. While moving a 106x24 metal building, antenna on building came in contact with a 14,400-volt overhead power line. Employees had entered the structure to steer the trailer while moving..

Violations noted:

General Rules  
Administrative Rules – Recording and Reporting of Occupational Injuries and Illnesses

24. Employee and co-worker were installing eavestroughs on two-story residence. While moving extension ladder, it came in contact with 7200-volt power line.

Violations noted:

Fixed and Portable Ladders  
General Rules  
Administrative Rules – Recording and Reporting of Occupational Injuries and Illnesses

25. As employees were erecting steel on building, ladder slipped and employee fell 7-feet to concrete below.

Violations noted:

General Rules  
Personal Protective Equipment  
Fixed and Portable Ladders  
Administrative Rules – Recording and Reporting of Occupational Injuries and Illnesses  
Administrative Rules – Inspections and Investigations, Citations, and Proposed Penalties

### **Construction (continued):**

26. While changing a capacitor for outside light, employee received a shock and fell from the ladder he was working from.

Violations noted:

General Rules  
Fixed and Portable Ladders  
Electrical Installations

27. Employee was clearing snow from roof of residential building when he fell off the roof.

Violations noted:

Fall Protection  
General Rules  
Administrative Rules – Recording and Reporting of Occupational Injuries and Illnesses

28. While removing a 6-inch cap from pipe, the cap struck employee in the face and caused him to fall from aerial work platform to concrete floor below.

Violations noted:

General Rules  
Aerial Work Platforms

29. Employee fell from opening in log cabin roof to ground below while sheeting.

Violations noted:

General Rules  
Fixed and Portable Ladders  
Scaffolds  
Fall Protection  
Personal Protection Equipment  
Administrative Rules – Recording and Reporting of Occupational Injuries and Illnesses  
Administrative Rules – Inspections and Investigations, Citations, and Proposed Penalties

30. While working in an excavation installing a drainage pipe, dirt caved in and caused employee to strike his head on concrete pipe.



Violations noted:

- General Rules
- Excavation, Trenching and Shoring
- Handling and Storage of Materials
- Lifting and Digging Equipment

## **Manufacturing:**

31. Employee was performing preventative maintenance duties in a dust collector when he fell through wall opening to floor 33 feet below.

Violations noted:

- Wall Openings
- Confined Space

## **Manufacturing (continued):**

32. Employee was preheating and welding an aluminum mold that contained two cavities filled with water and sodium nitrate. The cavities were not vented, the fluid evaporated and caused the mold and backing plate to blow apart striking employee in the chest.

Violations noted:

- General Provisions
- Welding and Cutting
- Administrative Rules – Recording and Reporting

33. Operator was unloading finished parts. As he was doing so, he walked to back of machine and unbolted machine guard. Machine then indexed crushing his head in machine.

Violations noted:

- Lockout/Tagout

34. Employee was working as part of cleaning crew. As he tried to move tire out of way of roll-off dumpster, the dumpster rolled off the truck and struck him.

Violations noted:

- General Provisions

35. While setting up a steel rule die cutting press, employee activated the platen with a two-hand control while his head was under the platen area resulting in his head being crushed. The presence-sensing device on press had been disabled due to frequent shut downs caused by dust accumulations.

Violations noted:

- General Provisions
- Design Safety Standards for Electrical Systems

36. Employee's job was to load bales of recycled paper onto conveyor with forklift and then was cut the wire holding the bale together. The bales then would continue up the conveyor incline to the beater. He was found 15 feet on the conveyor incline with a bale on top of him.

Violations noted:

- Conveyors

## Powered Industrial Trucks

37. Employee was on the debarker platform and was found entangled in the power feed rolls.

Violations noted:

Floor and Wall Openings, Stairways, Skylights  
Guards for Power Transmission

38. Employee was found with his upper torso inside a testing hatch on a reaction vessel where a polyol was being manufactured. Was exposed to nitrogen purge while in vessel.

Violations noted:

General Duty  
Hazard Communication  
Confined Space

## Transportation, Communications, Electric, Gas and Sanitary Services:

39. While attempting to clean up spillage while picking up a refuse container, employee was pinned between container and the ground.

Violations noted:

Refuse Packer Units

40. Employees were assigned to work on docks tightening supports. While doing so, he fell into water 8 feet deep and drowned.

Violations noted:

General Duty  
General Provisions  
Recording and Reporting of Injuries and Illnesses  
Inspection and Investigation, Citations and Proposed Penalties  
Personal Protective Equipment

41. As employee was unloading equipment from semi trailer with forklift, the equipment fell out of truck onto him.

Violations noted:

Powered Industrial Trucks

42. While being transported to pick up a vehicle on employer's property, employee was standing on a platform on the back of a cargo van when he fell off and hit his head on the asphalt.

Violations noted:

General Duty  
General Provisions

43. Two employees were bringing a coal-fired boiler on line. There was an excessive amount of coal dust left in the system due to it not being purged properly. When employee lit the fire, an explosion occurred.

Violations noted:

General Duty

## **Retail Trade:**

44. Employee was working under a tractor suspended by a chain fall. The bolts holding the lift plate to the front of the tractor bent and stripped out of their holes allowing the front end of the tractor to fall, pinning the employee and crushing his chest.

Violations noted:

General Provisions  
Hand and Portable Power Tools  
Slings

## **Wholesale Trade:**

45. Employee was assisting in dumping large metal box of slag into back of truck. The box was on its side for emptying as the employee used a scrap piece of lumber to lever the box. The slag shifted and caused the lever to strike the employee in the head.

Violations noted:

General Duty  
Overhead and Gantry Cranes  
Personal Protective Equipment  
Slings

## **Services:**

46. Employee was standing on stepladder placing letters on marquee sign outside when he fell to ground below.

Violations noted:

Portable Ladders  
Administrative Rules – Reporting and Recording of Injuries and Illnesses

47. Employee was standing on a ladder retrieving a hat from an outside canopy when he fell.

Violations noted:

General Provisions  
Portable Ladders